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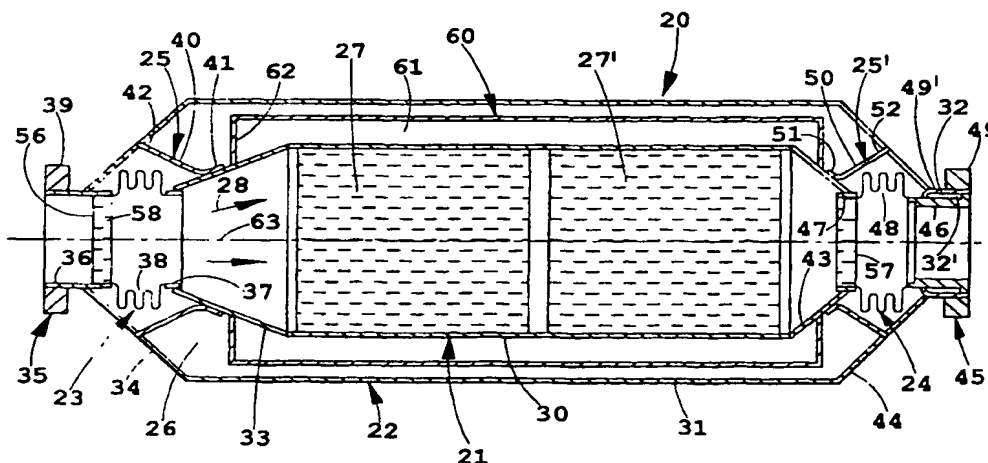
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(54) Title: VACUUM-INSULATED EXHAUST TREATMENT DEVICES WITH RADIALLY-EXTENDING SUPPORT STRUC-
TURES



(57) Abstract

An exhaust treatment device, such as a catalytic converter assembly (20) for vehicles includes an inner housing (21) having an inlet and an outlet defining a longitudinal direction (63) and having a catalytic material (27, 27') therein chosen to reduce undesirable emissions from the exhaust of a combustion engine as the exhaust passes from the inlet to the outlet. The catalytic converter assembly (20) further includes an outer housing (22) enclosing the inner housing (21) but characteristically not contacting the inner housing (21), the outer housing (22) including an inlet and an outlet that align with the inlet and outlet of the inner housing (21), the inner and outer housing (21, 22) including walls (30, 31) forming a sealed cavity (26) around the inner housing (21), the cavity (26) having a vacuum drawn therein. The catalytic converter assembly (20) further includes supports (25) of various configurations and materials that extend radially between the inner and outer housings (21, 22).